MS. PARILLO: Hi, I'm Jill Parillo. On behalf of Physicians for Social Responsibility and its 32,000 members, I thank you for the opportunity to comment on DOE's draft repository supplemental environmental impact statement and its draft rail alignment environmental impact statement for the planned high-level nuclear waste repository at Yucca Mountain, Nevada.

The purpose of my testimony today is to outline PSR's, Physicians for Social Responsibilities, concerns regarding the significant threats to human life and health posed by the proposed Yucca Mountain nuclear waste storage site. Before discussing these public health threats in greater detail, it is important to point out that the Yucca Mountain proposal will not solve our nation's nuclear waste problems. According to the Congressional Research Service, more than 54,000 metric tons of commercially generated nuclear waste has already accumulated at

reactor sites around the United States.

In addition, with our 104 operating reactors, an additional two thousand tons of nuclear waste will occur annually. The inventory of commercially generated nuclear waste in the United States will then exceed the recently expanded 70,000 metric ton statuary capacity of Yucca Mountain by 2015. Two years before DOE's estimated opening date.

2 Since its inception, Yucca Mountain has failed to meet even minimum public health and safety standards. In 2004, the US Court of Appeals for the DC Circuit ruled that the Environmental Protection Agency's original 10,000 year safety standard on radiation containment at Yucca as inconsistent with Congressionally mandated National Academy of Sciences' recommendations. Despite this ruling, the revised two-tiered standards proposed by EPA remain inadequate to protect public health after Yucca is filled and sealed.

Under the revised standards, once Yucca is filled and sealed, EPA would legally allow the public to be exposed to a fifteen millirem/year dose of radiation for the first 10,000 years of the repository's life span. This is despite the fact that for decades, EPA's argued that any radiation dose between fifteen to twenty-five millirem and above per year is non-protective of public health.

For the period beyond 10,000 years, the EPA sets a radiation exposure limit of 350 millirem/year. According to a National Academy of Sciences report on radiation risks, this 2300 percent exposure increase over what is permitted for the first 10,000 years will cause cancer in approximately one out of every thirty-six people exposed. Furthermore, given that compliance for this post-10,000 year standard would be based on a median dose distribution rather than a mean dose distribution. Half of the radiation exposures could result in doses exceeding 350

millirem/year.

3 The Yucca Mountain plan proposal presents an additional threat to human health and life through its transportation plan. If the current stock of commercially generated nuclear waste is shipped by truck to a repository like Yucca Mountain, one shipment every four hours, twenty-four hours a day for thirty-eight years, at least, would cross the United States through forty-five states. The draft supplemental environmental impact statement that we're speaking about today estimates that if there were no major accidents, five people, one member of the public and four transportation workers, would die of cancer from the transport of this radioactive waste within fifty years.

However, DOE assures us in this statement that, "This number of fatalities, which would occur over as many as fifty years, would not be discernable from the 600,000 people who would die from cancer every year in

the United States." I assure you that to PSR, every loss of life is discernable and matters. A policy that allows for loss of life is not ethical. DOE also estimated in this environmental impact statement draft that five to six people would die from truck and rail accidents within fifty years of transporting waste to Yucca. However, if there was an "incident," like a severe transportation accident in an urban area, DOE also reports that it would result in an estimated nine cancer fatalities. 4

However, the state of Nevada, strangely, estimates exactly, using the same computer systems, that a rail accident of this type in an urban area, rather than nine fatalities, would result in thirteen to 40,868 cancers in an exposed population. DOE's estimates were also drastically different in comparison to Nevada's when estimating the amount of casualties or injuries that would result if a truck or rail shipment was

sabotaged by a terrorist with a high energy density device, an object that would penetrate waste containers.

DOE estimated in its draft environmental impact statement that such an attack on a truck shipment in an urban area would expose 47,000 people to radiation from the accident, killing an estimated twenty eight people. And a train accident of such would result in 32,000 exposed and nineteen dead. Nevada's estimates for such an attack on either a truck or train prove that ten times that amount would be exposed to radiation and killed.

Nevada's estimates of consequences were made using the same computer programs that DOE developed and uses.] [Lastly, it is also critical that I bring to the attention of DOE and to the public that recent research on the effects of ionizing radiation, as was mentioned once before today, prove that very small doses of radiation from the storage or

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transport of this waste could lead to fatal cancers that once were thought to result only from high level doses of radiation.

Ionizing radiation in high level doses produced immediate damage, like skin burns, hair loss, and bone marrow destruction. But low doses are less predictable. The effects are not immediately visible, and involve the cancerous transformation of cells. Seven reports since 1956 have been published by the National Research Council's Committee on Biological Effects of Ionizing Radiation. The reports address the potential health effects from exposure to low doses of radiation.

Since 1990, the committee has supported the linear no-threshold model hypothesis. This hypothesis states that all exposure to radiation, no matter how small the dose, presents some risk to human health. The most recent committee report BEIR 7, calculated the expected cancer risk from a

singular exposure of .1 sievert. The committee found that in a lifetime, approximately forty-two of one hundred people will be diagnosed with cancer, and one cancer of these one hundred people will result from a single exposure of .1 sievert over low level radiation above background.

There is still a lack of scientific certainty over what level of radiation exposure leads to cancer. Mostly due to difficulty in proving causal link between a specific radiation exposure and adverse health effects. However, the likely risk is sufficient reason to prevent the Yucca Mountain policy from moving forward, since it will likely expose workers and hundreds of US communities to low levels of radiation. Thank you.

MR. BROWN: Thank you. Alfred Meyer?